

## Remarks

The drawings were objected to under 37 CFR 1.83(a). In response, Applicants have amended Fig. 10 to include semiconductor switch 1027 and optional bandpass filter 1029 as part of output stage 1028. Disclosure concerning a semiconductor switch being triggered to produce an ultra wideband waveform is provided in at least U.S. Patent 4,641,317 (the '317 patent) incorporated by reference in paragraph [0003] of the present application. Referring to the Summary of the Invention of the '317 patent, "In accordance with this invention, a pulse signal of a fixed or programmed rate is varied or modulated as to the time of turnon of pulses as a function of an intelligence signal. **The resultant pulse signals effect the turn-on, or triggering, of an avalanche mode operated semiconductor switch...**". Triggering of one or more transistors to produce an ultra wideband signal is described in the '317 patent in reference to Fig. 1 (see Column 3, Lines 23-39). As such, Applicants believe that no new matter has been added to the disclosure and that someone skilled in the art would clearly recognize from the disclosure of the '317 patent and from the discussion of Fig. 10 of the present application that output stage 1028 could include a semiconductor switch 1027 that would be triggered by signal 1026 and that output stage 1028 could also include optional include bandpass filter 1029 used to spectrally modify the produced ultra wideband signal. Specifically, the present application describes how bandpass filtering could be used to create one or more zero crossings in the time domain.

As required, the applicants have amended the specification to update the cross-reference section on page 1. Applicants have also modified paragraph [0121] to include specific references to semiconductor switch 1027 and optional bandpass filter 1029.

Claims 27-30, 36-39, and 42 were objected to because of informalities. Applicants have amended claims 27, 36, and 42 as required to overcome the objections.

Claims 28-29 and 37-38 were rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. Applicants respectfully traverse the rejection. As previously pointed out to the Examiner in regards to the amendment to Figure 10, the incorporated by reference disclosure of at least the '317 patent clearly describes a trigger signal being applied to a semiconductor switch to produce an ultra wideband signal. As such, Applicants believe that someone skilled in the art would

clearly recognize from the disclosure of the '317 patent and from the discussion of Fig. 10 of the present application that output stage 1028 could include a semiconductor switch 1027 that would be triggered by signal 1026 and that the semiconductor switch could comprise one or more transistors.

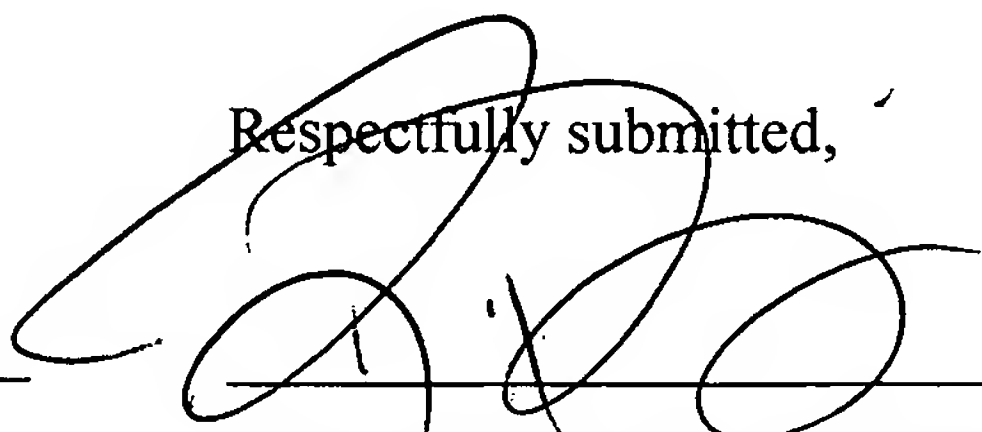
Claim 41 was rejected as having a limitation without an antecedent basis. Applicants have amended claim 41 to overcome the rejection.

Claims 23-25, 27-28, 30-34, 36-37, and 39-42 were rejected under 35 U.S.C. 102(b) as being anticipated by McKinney, U.S. Patent No. 3,701,154. Applicants respectfully traverse the rejection. Applicants have amended independent claims 23, 31, and 40 to include the limitations "a filter that spectrally modifies said ultra wideband signal to create one or more zero crossings in the time domain", "spectrally modifying the ultra wideband signal to create one or more zero crossing in the time domain", and "filtering the ultra wideband signal to create one or more zero crossings in the time domain", respectively. Use of a filter to create one or more zero crossings in the time domain" is not taught or suggested by McKinney. Examiner has also indicated this limitation was allowable subject matter in reference to now cancelled claims 26 and 35.

In view of the above remarks and amendments, it is believed that the present application is in condition for allowance.

Respectfully submitted,

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